

CLAIMS

1. A microwave generator (11) with a radiation antenna (26) connected to capacitors (13) to be recharged, and a high-voltage generator (35) as an energy supplier for charging up the capacitors (13),
characterised in that
the high-voltage generator (35) is connected by way of the radiation antenna (26) to a succession of capacitors (13) which can be successively connected in parallel with each other.
2. A microwave generator according to claim 1 characterised in that there is provided a coaxial succession of annular capacitors (13) each having a respective electrode (16) connected together with the others while the other electrode (15) can be connected to the most closely adjacent one by way of a switch (39).
3. A microwave generator according to claim 1 or claim 2 characterised in that disposed in the interior of the tubular electrode (16) is a number of axially mutually spaced annular electrodes (15).
4. A microwave generator according to the preceding claim characterised in that the annular electrodes (15) are of a cup-shaped configuration with a centrally apertured bottom (19), by means of which they are arranged in a row on a carrier (20).
5. A microwave generator according to one of the preceding claims characterised in that spacer elements (21) are arranged on the carrier (20) between the cup bottoms (19).
6. A microwave generator according to the preceding claim characterised in that the cup-shaped electrodes (15) are braced axially on the carrier (20) by means of an end cap (22) and the spacer elements (21) between their bottoms (19).

7. A microwave generator according to one of claims 3 to 6 characterised in that the spacings (17) between the annular electrodes (15) and the end profiles thereof are in the form of arc switches (39).

8. A microwave generator according to one of claims 4 to 7 characterised in that a frustoconical radiation antenna (26) is centred by the carrier (20) and is electrically connected with its smaller base (27) to the first capacitor (13) adjacent thereto on the carrier (20).

9. A microwave generator according to one of the preceding claims characterised in that the last capacitor (13) which is remote from the energy infeed has an arc switch (39) in relation to a terminating electrode (33) which is at the potential of the counterpart electrode (16).

10. A method of generating and radiating microwave energy characterised in that a sequence of capacitors which are successively switched on is charged up from a capacitive high-voltage generator by way of a radiation antenna.

11. A method according to claim 10 characterised in that the number of pulses to be radiated is predetermined by way of the number of capacitors which are to be successively charged up and the radiated energy is predetermined by way of the capacitance of said capacitors.